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## Injuries and Deaths Associated with Use of Snowmobiles — Maine, 1991–1996

During the 1995–96 winter season (i.e., November 1995 through April 1996), both the Maine Department of Inland Fisheries and Wildlife (DIFW) and the Maine Office of the Chief Medical Examiner (OCME) detected an increase in deaths associated with snowmobile use in Maine. From the fall of 1991 through the spring of 1995, three to eight snowmobile-related deaths occurred each winter season (mean: 5.4 per winter season); during the 1995–96 winter season, 12 deaths were recorded—the largest number of snowmobile-related deaths in 25 years. In addition, from 1991 through 1996, the number of registered snowmobiles increased from 61,641 to a record high of 76,477, respectively, and the death rate per registered vehicle in 1996 was higher than in any of the previous 5 years (Figure 1). To assist in the development and evaluation of strategies to prevent injury and death associated with the use of snowmobiles in Maine, the Bureau of Health, Maine Department of Human Services (BOH), collaborated with DIFW and OCME to examine data about fatal and nonfatal injuries associated with use of snowmobiles from 1991 through 1996. This report summarizes the results of this analysis and recommends strategies for preventing such deaths and injuries.

Maine state law requires snowmobile operators (residents and nonresidents) to report all incidents involving snowmobiles that result in injury requiring medical attention or in property damage of ≥$300.* DIFW wardens or other law-enforcement officers investigate all reported incidents and collect data about the time of occurrence, weather conditions, terrain, alcohol use, helmet use, and cause and circumstances. Data about snowmobile-associated fatalities were obtained from BOH death certificates (age, sex, residence, education, and marital status) and from a computerized database at the OCME (blood or vitreous alcohol levels and cause of death).

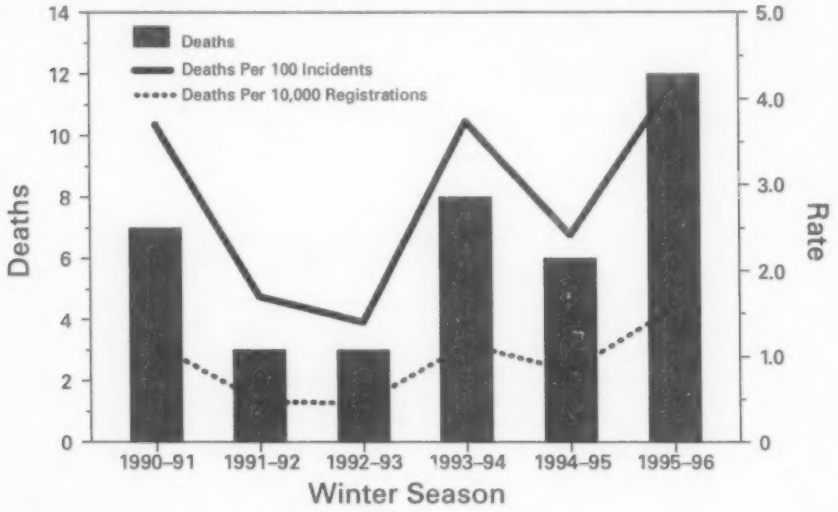
### Characteristics of Incidents

For the winter seasons of 1990–91 through 1995–96, a total of 1355 snowmobile-related incidents were investigated (range: 173 [1992] to 285 [1996], mean: 226 per season). These 1355 incidents involved 1828 snowmobiles and resulted in 903 injuries among 2105 operators and passengers. A total of 1565 (86%) of the snowmobile operators were male. Of the 1740 operators for whom age was known, 1076 (62%)

*MRSA Title 12, §7827, ¶22A and B.

*Snowmobiles — Continued*

**FIGURE 1. Number of deaths and death rates per snowmobile-related incident and per snowmobile registration — Maine, 1990–91 through 1995–96 winter seasons**




were aged >25 years. Of the 1817 operators and passengers for whom information was available, 1312 (72%) were wearing helmets at the time of the incident.

Weather conditions were known for 1263 incidents, of which 1002 (79%) occurred during clear weather; terrain was known for 1253 incidents, of which 535 (43%) occurred on marked and groomed snowmobile trails. Of the 1307 incidents for which time of incident was known, 652 (50%) occurred during darker hours (i.e., 4 p.m.–6 a.m.). The primary causes of the incidents were known for 1311 incidents and included excessive speed (684 [52%]), inattention or careless operation (350 [27%]), mechanical failure (82 [6%]), operating on a public way (32 [2%]), operating on a steep hill or snow bank (28 [2%]), crossing unsafe ice (18 [1%]), and other (117 [9%]). Of 1307 incidents for which data on type of incident were available, 301 (23%) were falls off the snowmobile, 283 (22%) were collisions with another snowmobile, 201 (15%) were collisions with trees, 187 (14%) were collisions with a rock or other object, 97 (7%) were falls off a bank or sudden drop in terrain, 40 (3%) were collisions with another motor vehicle, and 25 (2%) were falls through ice. The role of alcohol had been evaluated for 1255 incidents, and alcohol was determined to be a contributing factor in 159 (13%) of these incidents.

Of the 903 injuries, 282 (31%) involved a lower extremity, 165 (18%) an upper extremity, 151 (17%) the head or neck, 79 (9%) the chest or trunk, and 63 (7%) the back; for the remaining 163 (18%), the location of injury was not specified. Specific types of injuries included fractures (32%); lacerations (10%); contusions (7%); concussions (4%); abrasions (3%); dislocations (2%); burns (2%); exposure (1%); sprains (1%); internal or puncture (<1%); drowning (<1%); and unspecified, other, or unknown (37%).

*Snowmobiles — Continued*

**Deaths**

During 1991–1996, a total of 39 deaths were associated with snowmobile use, of which 32 (82%) resulted from trauma and seven from drowning; 37 (95%) decedents were male, and 16 (41%) were married. Thirty (77%) of the 39 decedents were residents of Maine. At the time of the incident, 37 decedents were operating the snowmobile, and two were passengers. The median age of decedents was 34 years (range: 12–69 years). Decedents who had been operating the snowmobile were more likely to be aged >25 years (86%) than operators involved in all (fatal or nonfatal) incidents (62%). For the 37 decedents for whom data were available, the median number of years of education was 12 (range: 5–16 years). Of the 31 decedents for whom data were available, 25 (81%) were wearing helmets at the time of the incident. Alcohol levels were obtained for 37 decedents; of these, either blood or vitreous alcohol levels were >0.08 g/dL in 15 (41%). Fatal incidents were more likely to occur during darker hours of the day (4 p.m.–6 a.m.).

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**Editorial Note:** The findings in this report indicate that most snowmobile-associated incidents in Maine during 1991–1996 resulted from collisions caused by excessive speed and careless operation of the vehicle. The high proportion of incidents that occurred during darker periods underscores the importance of increased caution during such periods and the need to evaluate the effect of snowmobile characteristics (e.g., headlight luminance) in reducing the hazards of operating snowmobiles at nighttime. In addition, alcohol was determined to be a factor in 13% of all incidents, and elevated alcohol levels were detected in 41% of all decedents; although blood alcohol levels were not measured in the operators involved in all snowmobile-associated incidents, these findings suggest an increased risk for fatal injury associated with alcohol use while operating a snowmobile. In a previous report from New Hampshire, the prevalence of alcohol use was substantially lower among self-reported snowmobile incidents than among police-reported incidents (*1*). However, in Maine, determinations about the role of alcohol were made by law-enforcement officers for all reported incidents.

The findings in this report are subject to at least two limitations. First, because levels of snowmobile use vary in relation to snowfall and other weather conditions and because not all nonresidents are required to register their snowmobiles in Maine, snowmobile registrations are only a crude approximation of actual use of snowmobiles; rates of incidents or deaths based on snowmobile-miles driven or hours of use could not be determined. Second, because DIFW surveillance statistics had been summarized annually, the OCME data and death-certificate data were compared with all snowmobile-associated incidents reported to DIFW rather than to nonfatal incidents only. In addition, factors associated with property damage could not be differentiated from those associated with injury. Because risk factors associated with property damage may differ from those associated with injury incidents, the findings may not accurately reflect risks for injuries. For example, if alcohol contributed disproportionately to injury-producing incidents, the aggregate analysis would have resulted in an underestimation of the contribution of alcohol to injuries.

*Snowmobiles — Continued*

The results of this investigation suggest that educational interventions to reduce snowmobile-associated injury and death should focus on promoting more cautious snowmobile operation and reducing the use of alcohol while operating a snowmobile. A previous report from New Hampshire indicated that most snowmobile-related deaths occurred among males in their 20s and suggested targeting interventions (e.g., operator safety courses) at males aged <30 years (*1*); however, the findings in this report suggest that the target population should be broadened to include older men with families. The effectiveness of educational efforts should be compared with other interventions such as limiting vehicle horsepower and velocity potential or increased regulation and enforcement of operating speed limits.

The findings in this report will be incorporated into a statewide strategic plan in Maine to improve snowmobile safety. Efforts will include safety education programs in collaboration with local snowmobiling associations, placing warning signs at strategic locations on snowmobile trails, and establishing local snowmobile safety-check stations.

*Reference*

1. CDC. Injuries associated with use of snowmobiles—New Hampshire, 1989–1992. MMWR 1995; 44:1–3.

## Outbreaks of *Escherichia coli* O157:H7 Infection and Cryptosporidiosis Associated with Drinking Unpasteurized Apple Cider — Connecticut and New York, October 1996

In October 1996, unpasteurized apple cider or juice was associated with three outbreaks of gastrointestinal illness. In the Western United States, an outbreak of *Escherichia coli* O157:H7 infections associated with unpasteurized commercial apple juice caused illness in 66 persons and one death (*1*). In addition, one outbreak of apple cider-related *E. coli* O157:H7 infections and another of cider-related *Cryptosporidium parvum* infections occurred in the Northeast. Apple cider is a traditional beverage produced and consumed in the fall. Cider often is manufactured locally at small cider mills where apples are crushed in presses, and the cider frequently is not pasteurized before sale. This report summarizes the clinical and epidemiologic features of the two apple cider-related outbreaks, which suggest that current practices for producing apple cider may not be adequate to prevent microbial contamination.

### Connecticut

On October 11, the Connecticut Department of Public Health (DPH) was notified by staff of the Connecticut site of CDC's Foodborne Diseases Active Surveillance Network of four reported cases of *E. coli* O157:H7 infection in residents of New Haven County (1995 population: 794,785). An investigation of this cluster was initiated by DPH. A case was defined as onset of diarrhea (i.e., three or more loose stools per day) during October 1–11 in a Connecticut resident and laboratory-confirmed infection with *E. coli* O157:H7. Additional case-finding was conducted by notifying all Connecticut clinical laboratories of a possible outbreak of *E. coli* O157:H7 infection and requesting that cases be reported immediately to DPH. As a result of active case-finding, DPH initially identified eight cases with onset during October 3–11.

*Unpasteurized Apple Cider — Continued*

Of the eight case-patients, six were female, and ages of all eight ranged from 2 to 73 years (mean: 25 years). Case-patients resided in six towns within New Haven County. Manifestations included bloody diarrhea and abdominal pain (eight patients), vomiting (five), and fever (four). Duration of illness ranged from 3 to 11 days (median: 7 days). Five patients were hospitalized, including one with hemolytic uremic syndrome (HUS) and one with thrombotic thrombocytopenic purpura.

On October 17, DPH conducted a matched case-control study to determine probable sources for the outbreak. Controls were selected from telephone-exchange lists and were matched to cases by sex, town of residence, and age group. Controls reported no diarrhea during the 20-day period beginning 10 days before illness onset in their matched cases. Case-patients were asked about food consumption during the 7 days preceding illness, and controls were asked about consumption during the same 7 days as their matched cases. Based on interviews with the first eight case-patients and 21 controls, increased risk for illness was associated with drinking fresh apple cider during the 7 days preceding onset of illness (matched odds ratio [OR]=12.0; 95% confidence interval [CI]=1.3–111.3; $p<0.01$). Specifically, illness was associated with drinking brand A cider (matched OR=undefined; 95% CI=3.5–infinity; $p<0.01$). No other food item (including ground beef, unpasteurized milk, or lettuce) or common event was significantly associated with increased risk for illness. Of the eight patients, seven reported drinking brand A cider during the 7 days preceding illness.

After completion of the case-control study, six additional patients were identified; of these, four had culture-confirmed infection, and two had been hospitalized with HUS but did not have culture-confirmed *E. coli* O157:H7 infection. All six had a history of drinking brand A cider. Ten of the 12 outbreak-associated isolates of *E. coli* O157:H7 were sent to CDC for pulse-field gel electrophoresis typing; all 10 were determined to be closely related.

On October 18, DPH and the Connecticut Department of Consumer Protection (DCP) advised Connecticut residents to discard or boil before drinking all brand A cider purchased since the beginning of the cider season in September. DCP coordinated a recall of brand A cider from all retail outlets. Approximately 9000 gallons of the cider had been distributed throughout Connecticut and three neighboring states. DCP and the regional office of the Food and Drug Administration (FDA) notified regulatory agency and state health department personnel in the three neighboring states of the recall.

Brand A cider was pressed at a mill in a residential area from apples purchased from multiple sources. Some of the apples used were "drop" apples (i.e., apples picked up from the ground). All apples were brushed and washed in potable municipal water in a flow-through wash system before pressing in a wooden press. Potassium sorbate 0.1% was added as a preservative; the cider was not pasteurized.

**New York**

During October 10–15, a local hospital laboratory notified the Cortland County Health Department (CCHD) about 10 cases of laboratory-confirmed cryptosporidiosis with recent onset among county residents (1990 population: 48,963). During the same period in 1995, one case of cryptosporidiosis was reported to CCHD. All case-patients had onset of symptoms during September 28–October 10 and reported drinking apple cider produced at a local cider mill (mill A). CCHD, the New York State Department of

*Unpasteurized Apple Cider — Continued*

Health (NYSDOH), and the New York State Department of Agriculture and Markets (NYS A&M) initiated an investigation of this cluster.

A confirmed case was defined as onset of diarrhea during September 28–October 19 in a Cortland County resident and laboratory evidence of *Cryptosporidium* in a stool specimen. A suspected case was defined as onset of diarrhea during the outbreak period in a household member of a person with confirmed cryptosporidiosis. CCHD conducted active surveillance for additional cases by contacting area clinicians, hospitals, and laboratories.

A total of 20 confirmed and 11 suspected cases were identified from 19 households. The median age was 27 years (range: 1–62 years), and 17 were female. Symptoms included diarrhea (100%), abdominal cramping (55%), vomiting (39%), fever (36%), and bloody diarrhea (10%). The median duration of symptoms was 6 days (range: 1–21 days).

CCHD and NYSDOH conducted a matched case-control study to assess probable sources of the outbreak. One neighborhood-matched control-household was contacted for each household with a laboratory-confirmed case. In each control-household, an adult (age ≥18 years) member was asked about history of illness, whether anyone in the household had drank apple cider since September 28, which brand of cider was consumed, and the date the cider was purchased.

Eighteen case-households were included in the matched case-control study. A history of drinking cider from mill A was reported for at least one member of the 18 households, compared with only one of the 18 control-households (matched OR=undefined, $p<0.01$). Specifically, cider pressed during September 28–29 (i.e., opening weekend) was associated with illness: 15 of 17 case-households in which the purchase date was known compared with none of the control-households reported drinking cider pressed on opening weekend (matched OR=undefined, $p<0.01$).

Mill A purchased all apples for cider pressing from one New York orchard. Local and state health departments and NYS A&M inspected the cider mill and apple orchard. The owner of the orchard reported that only picked apples were sold to the cider mill, and drop apples were sold for use in processed or pasteurized foods. Before pressing, the mill washed and brushed the apples using water from a 45-foot drilled well; preservatives were not added to the cider. Although dairy livestock were not maintained by the orchard, the cider mill was located across the road from a dairy farm. Testing of remaining cider samples from opening weekend, swabs of equipment surfaces, and water obtained on October 21 from the drilled well did not yield *Cryptosporidium*. However, coliform bacteria were detected in four water samples obtained from the well, and *E. coli* was detected in one sample.

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**Editorial Note:** Unpasteurized apple cider and juice have been associated with outbreaks of *E. coli* O157:H7 infection, cryptosporidiosis, and salmonellosis (*1–4*).

*Unpasteurized Apple Cider — Continued*

Animals are the primary reservoir for the pathogenic organisms associated with these outbreaks. In particular, cattle, deer, and sheep can asymptomatically carry *E. coli* O157:H7 and *Cryptosporidium*, and many animals, including cattle, chickens, and pigs, can asymptomatically carry *Salmonella*. Although the exact mechanisms of contamination for these previous outbreaks were not clearly determined, in three of the outbreaks, manure was suspected to have contaminated the apples. For example, in an outbreak of cryptosporidiosis in 1993, drop apples were collected from trees adjacent to an area grazed by cattle whose stool contained *Cryptosporidium* (*3*), and in a salmonellosis outbreak in 1974, drop apples had been collected from an orchard fertilized with manure (*4*). The practice of using drop apples for making apple cider is common (*2*), and apples can become contaminated by resting on ground contaminated with manure. In an outbreak of *E. coli* O157:H7 infections in 1991 (*2*), the cider press operator also raised cattle, and cattle grazed in a field adjacent to the mill. The presence of animals near a cider mill can result in manure inadvertently contacting apples, equipment, or workers' hands. In addition, apples can become contaminated if transported or stored in areas that contain manure, or if rinsed with contaminated water.

These previous outbreaks of illness prompted recommendations to reduce the risk for producing contaminated cider, including 1) preventing the introduction of animal manure into orchards, 2) avoiding use of apples that have fallen to the ground, 3) washing and brushing apples before pressing, 4) using a preservative such as sodium benzoate, and 5) routine pasteurization (*3,5*). In the outbreaks in Connecticut and New York, some of these recommended production practices had been followed. For example, in Connecticut, apples were washed and brushed before pressing; however, drop apples were used. In New York, the mill reportedly did not use drop apples, and apples were washed and brushed before pressing; however, cattle were present near the farm, and the apples were washed with water from a source later determined to contain *E. coli*—an indicator of contamination with animal or human feces.

At least two factors complicate efforts to reduce the risk for transmission of enteric pathogens through unpasteurized apple cider and juice. First, a small number of pathogenic organisms can result in infection—ingestion of as few as 30 *Cryptosporidium* (*6*) and <1000 *E. coli* O157:H7 (*7*) have caused symptomatic infection in humans. Second, although apple cider and juice usually are acidic (pH of 3–4) (*5,8*), both *Cryptosporidium* and *E. coli* O157:H7 are acid-tolerant, and both organisms can survive in apple cider for up to 4 weeks (*3,5*). The addition of preservatives to apple cider containing *E. coli* O157:H7 does not consistently kill the organism (*5,8*), and *Cryptosporidium* oocysts are resistant to most common disinfectants (e.g., bleach, iodine, and sodium hydroxide) (*9*). Pasteurization and boiling kill *E. coli* O157:H7 and *Cryptosporidium*, and other methods that might increase the safety of cider are under investigation (*10*). FDA is evaluating information received at a public meeting held December 16–17, 1996, to determine methods to reduce the risk for illness associated with fresh juices. Until alternative effective methods are developed, consumers can reduce their risk for enteric infections by drinking pasteurized or boiled apple cider and juice.

*Unpasteurized Apple Cider — Continued*

*References*

1. CDC. Outbreak of *Escherichia coli* O157:H7 infections associated with drinking unpasteurized commercial apple juice—British Columbia, California, Colorado, and Washington, October 1996. MMWR 1996;45:975.
2. Besser RE, Lett SM, Weber JT, et al. An outbreak of diarrhea and hemolytic uremic syndrome from *Escherischia coli* O157:H7 in fresh-pressed apple cider. JAMA 1993;269:2217–20.
3. Millard PS, Gensheimer KF, Addiss DG, et al. An outbreak of cryptosporidiosis from fresh-pressed apple cider. JAMA 1994;272:1592–6.
4. CDC. Epidemiologic notes and reports: *Salmonella typhimurium* outbreak traced to a commercial apple cider—New Jersey. MMWR 1975;24:87–8.
5. Zhao T, Doyle MP, Besser RE. Fate of enterohemorrhagic *Escherichia coli* O157:H7 in apple cider with and without preservatives. Appl Environ Microbiol 1993;59:2526–30.
6. DuPont HL, Chappell CL, Sterling CR, Okhuysen PC, Rose JB, Jakubowski W. The infectivity of *Cryptosporidium parvum* in healthy volunteers. N Engl J Med 1995;332:855–9.
7. Griffin PM, Bell BP, Cieslak PR, et al. Large outbreak of *Escherichia coli* O157:H7 infections in the western United States: the big picture. In: Karmali MA, Goglio AG, eds. Recent advances in verocytotoxin-producing *Escherichia coli* infections. Amsterdam: Elsevier Science B.V., 1994;7–12.
8. Miller LG, Kaspar CW. *Escherichia coli* O157:H7 acid tolerance and survival in apple cider. J Food Prot 1994;57:460–4.
9. Campbell I, Tzipori AS, Hutchison G, Angus KW. Effect of disinfectants on survival of *Cryptosporidium* oocysts. Vet Rec 1982;111:414–5.
10. Anderson BC. Moist heat inactivation of *Cryptosporidium* sp. Am J Public Health 1985; 75:1433–4.

## Traumatic Brain Injury — Colorado, Missouri, Oklahoma, and Utah, 1990–1993

In 1992, traumatic brain injuries (TBIs) accounted for 34% of all injury deaths in the United States (*1*). To provide current estimates of TBI-associated morbidity and deaths, CDC has developed guidelines for public health agencies to use for TBI surveillance (*2*). This report describes recent findings from Colorado, Missouri, Oklahoma, and Utah based on these guidelines. These findings indicate a decrease in the annual rate of TBI and that rates of TBI are highest in association with falls and motor-vehicle crashes.

State health departments in Colorado, Missouri, Oklahoma, and Utah reviewed hospital discharge data using CDC guidelines to identify cases of TBI (*International Classification of Diseases, Ninth Revision, Clinical Modification*, codes 800.0–801.9, 803.0–804.9, and 850.0–854.1). The review identified all cases of TBI among patients in acute-care hospitals who had been discharged with primary or secondary diagnoses in these code ranges. In addition, the review identified TBI-related deaths and collected information from all death certificates or medical examiner reports that listed TBI or head injury in the sequence of conditions resulting in death. Records were linked to eliminate duplicate cases reported from more than one source. Supplementary information on external cause of injury was obtained from abstracts of medical records or health-care provider report forms for all cases (Missouri and Oklahoma) or from random samples of cases (Colorado [13% sample] and Utah [10% sample]). The periods of analysis were 1991–1993 for Colorado, 1992–1993 for Missouri and Oklahoma, and 1990–1993 for Utah. The combined TBI incidence rate for all four states was calculated using the sum of the mean annual number of cases for each state and the

*Traumatic Brain Injury — Continued*

sum of the population of each state estimated at the midpoint of the surveillance period (13.7 million total).

During the periods of surveillance, the mean annual number of TBIs reported from the four states was 13,978; of these, 3172 (23%) were fatal, and 11,611 (83%) persons were hospitalized. Most cases (9363 [67%]) occurred among males.

The annual combined rate of TBI for these states was 102.1 per 100,000 population (102.8 age-adjusted to 1990 U.S. population) (Table 1). State-specific rates were 101.9, 103.0, 97.7, and 108.0 for Colorado, Missouri, Oklahoma, and Utah, respectively. The incidence of TBI was highest among persons aged 15–24 years (176.7) and persons aged ≥75 years (186.2) (Table 2). Rates for males were approximately twice those for females (140.0 and 66.0, respectively).

The combined rate of hospitalizations for TBI was 84.8 per 100,000. The overall TBI-related death rate was 23.2. Among all fatal cases, 2367 (17%) persons died without being admitted to a hospital, and 805 (6%) died while receiving acute care in a hospital.

**TABLE 1. Mean annual number and rate* of traumatic brain injury†, by state — Colorado, Missouri, Oklahoma, and Utah, 1990–1993§**

| State | Population | No. fatal cases | | No. nonfatal cases | Total | Crude rate | Age-adjusted rate |
|---|---|---|---|---|---|---|---|
| | | Not hospitalized | Hospitalized | | | | |
| Colorado | 3,465,025 | 429 | 243 | 2859 | 3530 | 101.9 | 104.8 |
| Missouri | 5,213,792 | 924 | 330 | 4118 | 5371 | 103.0 | 104.1 |
| Oklahoma | 3,219,503 | 738 | 144 | 2264 | 3145 | 97.7 | 98.1 |
| Utah | 1,789,157 | 277 | 89 | 1566 | 1932 | 108.0 | 105.7 |
| Total¶ | 13,687,477 | 2367 | 805 | 10,806 | 13,978 | 102.1 | 102.8 |

*Per 100,000 persons.
†*International Classification of Diseases, Ninth Revision, Clinical Modification*, codes 800.0–801.9, 803.0–804.9, and 850.0–854.1.
§Information was collected for 1991–1993 in Colorado, 1992–1993 in Missouri and Oklahoma, and 1990–1993 in Utah.
¶Numbers may not add to total because of rounding.

**TABLE 2. Rate* of traumatic brain injury†, by age group and sex — Colorado, Missouri, Oklahoma, and Utah, 1990–1993§**

| Age group (yrs) | Male | Female | Total |
|---|---|---|---|
| ≤5 | 116.5 | 84.6 | 101.0 |
| 5–14 | 91.1 | 47.1 | 69.7 |
| 15–24 | 249.3 | 101.6 | 176.7 |
| 25–34 | 154.7 | 56.9 | 105.7 |
| 35–44 | 121.2 | 47.7 | 84.1 |
| 45–54 | 98.3 | 39.7 | 68.4 |
| 55–64 | 95.1 | 41.3 | 67.0 |
| 65–74 | 113.4 | 57.1 | 82.2 |
| ≥75 | 243.4 | 154.9 | 186.2 |
| Total | 140.0 | 66.0 | 102.1 |

*Per 100,000 persons.
†*International Classification of Diseases, Ninth Revision, Clinical Modification*, codes 800.0–801.9, 803.0–804.9, and 850.0–854.1.
§Information was collected for 1991–1993 in Colorado, 1992–1993 in Missouri and Oklahoma, and 1990–1993 in Utah.

*Traumatic Brain Injury — Continued*

Transportation-related occurrences (including involvement of motor vehicles, bicycles, pedestrians, or recreational vehicles) accounted for 47% of all injuries; falls accounted for 23% of injuries. Firearm-associated injuries and assaults not involving firearms accounted for 10% and 9% of reported injuries, respectively. The highest rates of TBI were associated with falls among persons aged ≥75 years (119.5) and with transportation among persons aged 15–24 years (114.6) (Table 3).

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**Editorial Note:** The epidemiologic patterns of TBI described in this report are similar to those based on an analysis of 1993 National Hospital Discharge Survey (NHDS) data, which indicated that an estimated 102.3 (95% confidence interval=90.9–113.7) TBI-related hospitalizations occurred per 100,000 population. However, the rates in this report and the NHDS estimate are substantially lower than rates during 1974–1986 (approximately 200 cases of TBI per 100,000 population annually during most of that period) (*3*). From 1979 through 1992, the TBI-associated death rate declined by 22%, largely because of a decrease in TBI-related deaths associated with motor-vehicle crashes (*1*). The findings in this report and from NHDS suggest a decline of approximately 50% in combined morbidity and death during a corresponding interval, indicating a disproportionately larger decrease in rates of nonfatal TBI that resulted in hospitalization. This decrease may reflect in part successes in injury-prevention

**TABLE 3. Rate* of traumatic brain injury†, by external cause of injury§ and age group — Colorado, Missouri, Oklahoma, and Utah, 1990–1993¶**

| Age group (yrs) | External cause of injury | | | | | |
|---|---|---|---|---|---|---|
| | Transport | Falls | Firearms | Nonfirearm assaults | Sports/ Recreation | Other/ Unknown |
| <5 | 25.9 | 50.6 | 0.7 | 12.8 | 0.8 | 10.5 |
| 5–14 | 36.2 | 11.8 | 1.9 | 1.4 | 5.1 | 8.0 |
| 15–24 | 114.6 | 12.9 | 20.6 | 14.0 | 6.6 | 15.2 |
| 25–34 | 55.6 | 9.4 | 11.2 | 14.9 | 2.7 | 9.4 |
| 35–44 | 42.1 | 11.5 | 11.2 | 12.5 | 1.5 | 9.0 |
| 45–54 | 28.5 | 17.0 | 8.4 | 5.7 | 0.7 | 9.1 |
| 55–64 | 27.1 | 19.5 | 8.8 | 2.7 | 0.6 | 5.3 |
| 65–74 | 25.3 | 35.2 | 10.7 | 3.0 | 0.1 | 7.7 |
| ≥75 | 38.4 | 119.5 | 13.4 | 2.9 | 0.2 | 9.5 |
| **Total** | **48.2** | **23.3** | **9.8** | **8.7** | **2.6** | **9.5** |

* Per 100,000 persons.

† *International Classification of Diseases, Ninth Revision, Clinical Modification*, codes 800.0–801.9, 803.0–804.9, and 850.0–854.1.

§ Information obtained from all cases reported in Missouri and Oklahoma and random samples of cases reviewed in Colorado (13% sample) and Utah (10% sample). Estimated mean annual numbers of cases by cause were 6597 transportation-related, 3186 fall-related, 1346 firearm-related, 1191 nonfirearm assault-related, and 353 sports- and recreation-related. An estimated mean of 727 and 579 cases each year were related to other and unknown causes, respectively.

¶ Information was collected for 1991–1993 in Colorado, 1992–1993 in Missouri and Oklahoma, and 1990–1993 in Utah.

*Traumatic Brain Injury — Continued*

efforts and changes in criteria for admitting patients to hospitals (e.g., patients with mild injuries are more frequently excluded).

The findings in this report suggest options for strengthening prevention efforts. For example, the high rates of transportation-related TBI indicate a need for improved prevention of motor-vehicle–related injuries through promotion of the use of occupant restraints and helmets. The rate of TBI attributable to falls among persons aged ≥75 years was the highest among all categories of age and cause; additional data about the circumstances of these falls can assist in planning effective prevention strategies.

CDC is promoting the development of a multistate TBI surveillance system to further characterize risk factors for and the incidence, external causes, severity, and outcomes of TBI. This information will enable the development and targeting of prevention programs focused on specific causes and populations and will assist in facilitating access to health care and other services for injured persons.

*References*

1. Sosin DM, Sniezek JE, Waxweiler RJ. Trends in death associated with traumatic brain injury, 1979 through 1992: success and failure. JAMA 1995;273:1778–80.
2. Thurman DJ, Sniezek JE, Johnson D, Greenspan A, Smith SM. Guidelines for surveillance of central nervous system injury. Atlanta: US Department of Health and Human Services, Public Health Service, CDC, 1995.
3. Kraus JF. Epidemiology of head injury. In: Cooper PR, ed. Head injury. 3rd ed. Baltimore, Maryland: Williams and Wilkins, 1993:1–25.

## *Notice to Readers*

### Changes in National Notifiable Diseases and Mortality Data Presentation

This issue of *MMWR* incorporates modifications to Tables I–III, Cases of Notifiable Diseases, United States, and to Table IV, Deaths in 121 U.S. Cities. This year, the purposes of the notifiable disease modifications are to add nationally notifiable diseases recently designated reportable in 25 states and to group selected vaccine-preventable diseases. Except where otherwise indicated, the data presented in the notifiable disease tables are transmitted to CDC through the National Electronic Telecommunications System for Surveillance (NETSS).

**Table I.** For the infectious diseases added during 1995 to the list of nationally notifiable diseases that are reportable in 25–39 states, data will now be included in Table I; these diseases are post-diarrheal hemolytic uremic syndrome and invasive group A streptococcal disease. Because not all nationally notifiable diseases are reportable in every state or territory, the reported number of cases of some diseases in Table I represent only the totals from states or territories in which the diseases are reportable.

**Tables II and III.** Although not all disease caused by different serogroups of *Neisseria meningitidis* are preventable by vaccination, the currently available polysaccharide vaccine is used to control outbreaks caused by vaccine-preventable serogroups. Conjugate vaccines designed for potential use in routine infant vaccination programs for the prevention of disease caused by selected serogroups (e.g., serogroup C) are

*Notices to Readers — Continued*

also being evaluated; therefore, reports of meningococcal disease will be moved from Table II to Table III.

**Table IV.** The reporting area of Madison (Dane County), Wisconsin, will no longer be included in the 121 Cities Mortality Reporting System. Because of the large catchment area for Dane County, Wisconsin, it will be replaced by two county reporting areas: Boise (Ada County), Idaho, and Lansing (Ingham County), Michigan. Therefore, Table IV will contain 122 cities and will be renamed "Deaths in 122 U.S. Cities."

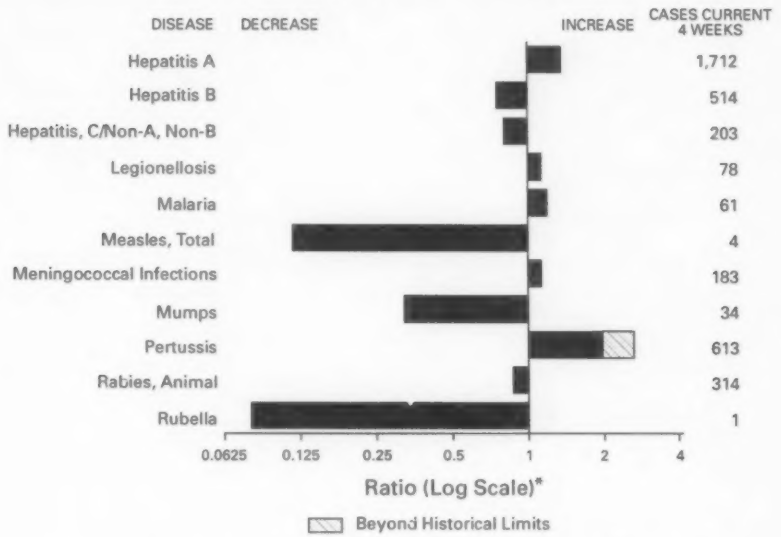
## *Notice to Readers*

### Course in Hospital Epidemiology

CDC and the Society for Healthcare Epidemiology of America (SHEA) will cosponsor a hospital epidemiology training course May 17–20, 1997, in Atlanta. The course, designed for infectious disease fellows, hospital epidemiologists, and infection-control practitioners, provides hands-on exercises to improve skills in detection, investigation, and control of epidemiologic problems encountered in the hospital setting and lectures and seminars on fundamental aspects of hospital epidemiology.

Additional information is available from SHEA Meetings Department, 875 Kings Highway, Suite 200, Woodbury, NJ 08095-3172; telephone (609) 845-1720; fax (609) 853-0411.

**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending January 4, 1997, with historical data — United States**




*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending January 4, 1997 (1st Week)**

| | Cum. 1997 | | Cum. 1997 |
|---|---|---|---|
| Anthrax | - | Plague | - |
| Brucellosis | - | Poliomyelitis, paralytic | - |
| Cholera | - | Psittacosis | - |
| Congenital rubella syndrome | - | Rabies, human | - |
| Cryptosporidiosis* | 5 | Rocky Mountain spotted fever (RMSF) | 1 |
| Diphtheria | - | Streptococcal disease, invasive | 1 |
| Encephalitis: California* | - | Streptococcal toxic-shock syndrome* | 1 |
| eastern equine* | - | Syphilis, congenital¶ | - |
| St. Louis* | - | Tetanus | 1 |
| western equine* | - | Toxic-shock syndrome | - |
| Hansen Disease | - | Trichinosis | - |
| Hantavirus pulmonary syndrome*† | - | Typhoid fever | 1 |
| Hemolytic uremic syndrome, post-diarrheal* | - | Yellow fever | - |
| HIV infection, pediatric*§ | - | | |

-:no reported cases
*Not notifiable in all states.
†Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update December 24, 1996.
¶Updated quarterly from reports to the Division of STD Prevention, NCHSTP.

## TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending January 4, 1997, and January 6, 1996 (1st Week)

| Reporting Area | AIDS* | | Chlamydia | | *Escherichia coli* O157:H7 | | Gonorrhea | | Hepatitis C/NA,NB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | NETSS† | PHLIS§ | | | | |
| | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1997 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 |
| UNITED STATES | - | - | 1,606 | 3,744 | 7 | - | 1,799 | 5,238 | 12 | 36 |
| NEW ENGLAND | - | - | 180 | 360 | - | - | 58 | 169 | - | - |
| Maine | - | - | - | - | - | - | - | 2 | - | - |
| N.H. | - | - | 1 | 7 | - | - | - | 4 | - | - |
| Vt. | - | - | U | U | - | - | - | 3 | - | - |
| Mass. | - | - | 150 | 189 | - | - | 47 | 65 | - | - |
| R.I. | - | - | 29 | 30 | - | - | 11 | 6 | - | - |
| Conn. | - | - | - | 134 | - | - | - | 89 | - | - |
| MID. ATLANTIC | - | - | - | 76 | - | - | - | 252 | - | - |
| Upstate N.Y. | - | - | N | N | - | - | - | - | - | - |
| N.Y. City | - | - | - | - | - | - | - | 208 | - | - |
| N.J. | - | - | - | 76 | - | - | - | 11 | - | - |
| Pa. | - | - | - | - | N | - | - | 33 | - | - |
| E.N. CENTRAL | - | - | 460 | 908 | 1 | - | 614 | 766 | 7 | 11 |
| Ohio | - | - | 123 | 181 | - | - | 93 | 115 | 3 | - |
| Ind. | - | - | 99 | - | 1 | - | 98 | 131 | - | - |
| Ill. | - | - | 175 | 415 | - | - | 110 | 309 | - | 2 |
| Mich. | - | - | 63 | 83 | - | - | 313 | 89 | 4 | 9 |
| Wis. | - | - | - | 229 | N | - | - | 122 | - | - |
| W.N. CENTRAL | - | - | 51 | 329 | 2 | - | 4 | 131 | - | - |
| Minn. | - | - | - | - | - | - | U | - | - | - |
| Iowa | - | - | - | - | 2 | - | - | - | - | - |
| Mo. | - | - | - | 166 | - | - | - | 38 | - | - |
| N. Dak. | - | - | 37 | - | - | - | 2 | - | - | - |
| S. Dak. | - | - | 14 | - | - | - | 2 | - | - | - |
| Nebr. | - | - | - | 66 | - | - | - | 44 | - | - |
| Kans. | - | - | - | 97 | - | - | - | 49 | - | - |
| S. ATLANTIC | - | - | 348 | 199 | - | - | 601 | 2,329 | - | 1 |
| Del. | - | - | - | - | - | - | 20 | 25 | - | - |
| Md. | - | - | - | - | N | - | - | 285 | - | - |
| D.C. | - | - | N | N | - | - | 73 | 105 | - | - |
| Va. | - | - | 103 | 53 | N | - | 89 | 172 | - | - |
| W. Va. | - | - | - | - | N | - | - | - | - | - |
| N.C. | - | - | - | - | - | - | 388 | 282 | - | - |
| S.C. | - | - | - | - | - | - | 24 | 367 | - | 1 |
| Ga. | - | - | 245 | - | - | - | 7 | 954 | U | - |
| Fla. | - | - | - | 146 | - | - | - | 139 | - | - |
| E.S. CENTRAL | - | - | 186 | 550 | 1 | - | 241 | 910 | - | 4 |
| Ky. | - | - | 38 | 119 | 1 | - | 28 | 75 | - | - |
| Tenn. | - | - | - | 111 | - | - | 1 | 130 | - | 4 |
| Ala. | - | - | 148 | 316 | - | - | 212 | 657 | - | - |
| Miss. | - | - | U | U | - | - | - | 48 | - | U |
| W.S. CENTRAL | - | - | 190 | 87 | 1 | - | 223 | 129 | - | 12 |
| Ark. | - | - | 10 | 26 | 1 | - | 20 | 71 | - | - |
| La. | - | - | 133 | - | - | - | 165 | - | - | - |
| Okla. | - | - | 47 | 61 | - | - | 38 | 58 | - | 12 |
| Tex. | - | - | - | - | - | - | - | - | - | - |
| MOUNTAIN | - | - | 75 | 158 | 1 | - | 27 | 138 | 5 | 5 |
| Mont. | - | - | - | - | - | - | - | - | - | - |
| Idaho | - | - | - | 1 | - | - | - | - | - | 3 |
| Wyo. | - | - | 8 | 11 | - | - | - | - | 4 | - |
| Colo. | - | - | U | U | 1 | - | - | 33 | - | 1 |
| N. Mex. | - | - | - | - | - | - | - | - | 1 | 1 |
| Ariz. | - | - | 67 | 60 | N | - | 27 | 69 | - | - |
| Utah | - | - | - | 66 | - | - | - | 26 | - | - |
| Nev. | - | - | - | 20 | - | - | - | 10 | - | - |
| PACIFIC | - | - | 116 | 1,077 | 1 | - | 31 | 414 | - | 3 |
| Wash. | - | - | - | 142 | - | - | - | 55 | - | - |
| Oreg. | - | - | - | 37 | 1 | - | - | - | - | - |
| Calif. | - | - | 103 | 895 | - | - | 30 | 345 | - | 2 |
| Alaska | - | - | 7 | 3 | - | - | 1 | 10 | - | 1 |
| Hawaii | - | - | 6 | - | N | - | - | 4 | - | - |
| Guam | - | - | - | 5 | N | - | - | 4 | - | - |
| P.R. | - | - | N | N | - | U | 5 | - | - | 1 |
| V.I. | - | - | N | N | N | U | - | - | - | - |
| Amer. Samoa | - | - | - | - | N | U | - | - | - | - |
| C.N.M.I. | - | - | N | N | N | U | - | 1 | - | - |

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update December 24, 1996.
†National Electronic Telecommunications System for Surveillance.
§Public Health Laboratory Information System.

## TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending January 4, 1997, and January 6, 1996 (1st Week)

| Reporting Area | Legionellosis | | Lyme Disease | | Malaria | | Syphilis (Primary & Secondary) | | Tuberculosis | | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 |
| UNITED STATES | 7 | 18 | 4 | 31 | 2 | 15 | 52 | 157 | 43 | 95 | 67 |
| NEW ENGLAND | - | 1 | - | - | - | - | 1 | 4 | - | 2 | 2 |
| Maine | - | - | - | - | - | - | - | - | - | - | - |
| N.H. | - | - | - | - | - | - | - | - | - | - | - |
| Vt. | - | - | - | - | - | - | - | - | - | - | - |
| Mass. | - | - | - | - | - | - | 1 | 1 | - | - | 2 |
| R.I. | - | 1 | - | - | - | - | - | - | - | 2 | - |
| Conn. | N | N | - | - | - | - | - | 3 | - | - | - |
| MID. ATLANTIC | - | 2 | - | 24 | - | 11 | - | - | - | 1 | 24 |
| Upstate N.Y. | - | - | - | - | - | - | - | - | - | 1 | 24 |
| N.Y. City | - | - | - | 5 | - | 5 | - | - | - | - | - |
| N.J. | - | 1 | - | 11 | - | 6 | - | - | - | - | - |
| Pa. | - | 1 | - | 8 | - | - | - | - | - | - | - |
| E.N. CENTRAL | 7 | 7 | 4 | - | - | 1 | 3 | 42 | 32 | 12 | - |
| Ohio | 2 | 1 | 1 | - | - | - | 1 | 21 | 21 | - | - |
| Ind. | 3 | 2 | 3 | - | - | - | 1 | 2 | - | - | - |
| Ill. | - | 1 | - | - | - | 1 | 1 | 15 | 11 | 12 | - |
| Mich. | 2 | 3 | - | - | - | - | - | - | - | - | - |
| Wis. | - | - | U | U | - | - | - | 4 | - | - | - |
| W.N. CENTRAL | - | 1 | - | - | - | 1 | - | 14 | - | - | 5 |
| Minn. | - | - | - | - | - | - | - | - | - | - | - |
| Iowa | - | - | - | - | - | - | - | - | - | - | 5 |
| Mo. | - | 1 | - | - | - | 1 | - | 9 | - | - | - |
| N. Dak. | - | - | - | - | - | - | - | - | - | - | - |
| S. Dak. | - | - | - | - | - | - | - | - | - | - | - |
| Nebr. | - | - | - | - | - | - | - | - | - | - | - |
| Kans. | - | - | - | - | - | - | - | 5 | - | - | - |
| S. ATLANTIC | - | 1 | - | 7 | - | - | 26 | 36 | 1 | 2 | 35 |
| Del. | - | - | - | 1 | - | - | - | - | - | 2 | - |
| Md. | - | 1 | - | 6 | - | - | - | - | - | - | - |
| D.C. | - | - | - | - | - | - | - | 2 | 1 | - | - |
| Va. | - | - | - | - | - | - | 7 | 14 | - | - | - |
| W. Va. | - | - | - | - | - | - | - | - | - | - | - |
| N.C. | - | - | - | - | - | - | 10 | - | - | - | 32 |
| S.C. | - | - | - | - | - | - | - | - | - | - | - |
| Ga. | - | - | - | - | - | - | 7 | 16 | - | - | 1 |
| Fla. | - | - | - | - | - | - | 2 | 4 | - | - | 2 |
| E.S. CENTRAL | - | 3 | - | - | - | - | 9 | 46 | 5 | 7 | 1 |
| Ky. | - | 3 | - | - | - | - | 2 | 7 | - | 1 | 1 |
| Tenn. | - | - | - | - | - | - | - | 5 | - | - | - |
| Ala. | - | - | - | - | - | - | 7 | 18 | 5 | 6 | - |
| Miss. | - | - | - | - | - | - | - | 16 | - | - | - |
| W.S. CENTRAL | - | - | - | - | - | - | 13 | 5 | - | 9 | - |
| Ark. | - | - | - | - | - | - | - | 5 | - | - | - |
| La. | - | - | - | - | - | - | 11 | - | - | - | - |
| Okla. | - | - | - | - | - | - | 2 | - | - | 9 | - |
| Tex. | - | - | - | - | - | - | - | - | - | - | - |
| MOUNTAIN | - | - | - | - | - | - | - | 7 | - | 1 | - |
| Mont. | - | - | - | - | - | - | - | - | - | - | - |
| Idaho | - | - | - | - | - | - | - | - | - | - | - |
| Wyo. | - | - | - | - | - | - | - | - | - | - | - |
| Colo. | - | - | - | - | - | - | - | - | - | - | - |
| N. Mex. | - | - | - | - | - | - | - | - | - | - | - |
| Ariz. | - | - | - | - | - | - | - | 5 | - | 1 | - |
| Utah | - | - | - | - | - | - | - | - | - | - | - |
| Nev. | - | - | - | - | - | - | - | 2 | - | - | - |
| PACIFIC | - | 3 | - | - | 2 | 2 | - | 3 | 5 | 61 | - |
| Wash. | - | - | - | - | - | - | - | - | - | 5 | - |
| Oreg. | - | - | - | - | 1 | 1 | - | - | - | - | - |
| Calif. | - | 3 | - | - | 1 | 1 | - | 3 | 2 | 53 | - |
| Alaska | - | - | - | - | - | - | - | - | - | 3 | - |
| Hawaii | - | - | - | - | - | - | - | - | 3 | - | - |
| Guam | - | - | - | - | - | - | - | 1 | - | - | - |
| P.R. | - | - | - | - | - | - | 3 | - | - | - | - |
| V.I. | - | - | - | - | - | - | - | - | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | - | - | - | - | - |
| C.N.M.I. | - | - | - | - | - | - | - | - | - | - | - |

N: Not notifiable U: Unavailable -: no reported cases

## TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 4, 1997, and January 6, 1996 (1st Week)

| Reporting Area | *H. influenzae*, invasive | | Hepatitis (Viral), by type | | | | Measles (Rubeola) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | | B | | Indigenous | | Imported† | | Total | |
| | Cum. 1997* | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | 1997 | Cum. 1997 | Cum. 1997 | Cum. 1996 |
| UNITED STATES | 8 | 24 | 65 | 322 | 27 | 92 | - | - | - | - | - | - |
| NEW ENGLAND | - | - | - | 2 | 1 | 1 | - | - | - | - | - | - |
| Maine | - | - | - | - | - | - | U | - | U | - | - | - |
| N.H. | - | - | - | - | - | - | - | - | - | - | - | - |
| Vt. | - | - | - | - | - | - | U | - | U | - | - | - |
| Mass. | - | - | - | - | 1 | - | - | - | - | - | - | - |
| R.I. | - | - | - | - | - | - | - | - | - | - | - | - |
| Conn. | - | - | - | 2 | - | 1 | U | - | U | - | - | - |
| MID. ATLANTIC | - | 2 | - | 17 | - | 11 | - | - | - | - | - | - |
| Upstate N.Y. | - | - | - | - | - | - | - | - | - | - | - | - |
| N.Y. City | - | - | - | 3 | - | 4 | U | - | U | - | - | - |
| N.J. | - | 2 | - | 12 | - | 6 | U | - | U | - | - | - |
| Pa. | - | - | - | 2 | - | 1 | U | - | U | - | - | - |
| E.N. CENTRAL | 2 | 6 | 15 | 29 | 7 | 22 | - | - | - | - | - | - |
| Ohio | 2 | 5 | 4 | 7 | - | 2 | - | - | - | - | - | - |
| Ind. | - | - | 5 | - | - | 2 | - | - | - | - | - | - |
| Ill. | - | 1 | - | 9 | - | 10 | - | - | - | - | - | - |
| Mich. | - | - | 6 | 7 | 7 | 5 | - | - | - | - | - | - |
| Wis. | - | - | - | 6 | - | 3 | U | - | U | - | - | - |
| W.N. CENTRAL | - | 2 | 2 | 21 | 3 | 5 | - | - | - | - | - | - |
| Minn. | - | - | - | - | - | - | U | - | U | - | - | - |
| Iowa | - | 1 | 2 | 3 | 3 | 1 | - | - | - | - | - | - |
| Mo. | - | 1 | - | 16 | - | 3 | - | - | - | - | - | - |
| N. Dak. | - | - | - | - | - | - | - | - | - | - | - | - |
| S. Dak. | - | - | - | - | - | - | - | - | - | - | - | - |
| Nebr. | - | - | - | 2 | - | 1 | - | - | - | - | - | - |
| Kans. | - | - | - | - | - | - | - | - | - | - | - | - |
| S. ATLANTIC | 4 | - | 2 | 5 | 5 | 16 | - | - | - | - | - | - |
| Del. | - | - | - | - | - | - | - | - | - | - | - | - |
| Md. | - | - | - | 1 | - | 5 | U | - | U | - | - | - |
| D.C. | 2 | - | - | - | 1 | 1 | - | - | - | - | - | - |
| Va. | - | - | - | - | - | - | - | - | - | - | - | - |
| W. Va. | - | - | - | - | - | - | U | - | U | - | - | - |
| N.C. | 2 | - | 2 | 1 | 4 | 10 | - | - | - | - | - | - |
| S.C. | - | - | - | - | - | - | - | - | - | - | - | - |
| Ga. | - | - | - | - | - | - | - | - | - | - | - | - |
| Fla. | - | - | - | 3 | - | - | - | - | - | - | - | - |
| E.S. CENTRAL | 1 | 1 | - | 5 | - | 6 | - | - | - | - | - | - |
| Ky. | 1 | - | - | - | - | - | - | - | - | - | - | - |
| Tenn. | - | 1 | - | 3 | - | 6 | - | - | - | - | - | - |
| Ala. | - | - | - | - | - | - | - | - | - | - | - | - |
| Miss. | - | - | - | 2 | - | U | U | - | U | - | - | - |
| W.S. CENTRAL | - | 1 | 1 | 31 | - | 2 | - | - | - | - | - | - |
| Ark. | - | - | 1 | - | - | - | - | - | - | - | - | - |
| La. | - | - | - | - | - | - | - | - | - | - | - | - |
| Okla. | - | 1 | - | 31 | - | 2 | - | - | - | - | - | - |
| Tex. | - | - | - | - | - | - | - | - | - | - | - | - |
| MOUNTAIN | - | 2 | 18 | 59 | 7 | 13 | - | - | - | - | - | - |
| Mont. | - | - | - | - | - | - | - | - | - | - | - | - |
| Idaho | - | 1 | 3 | 11 | - | - | - | - | - | - | - | - |
| Wyo. | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Colo. | - | - | 8 | 4 | 2 | 2 | - | - | - | - | - | - |
| N. Mex. | - | - | 2 | 12 | 5 | 6 | - | - | - | - | - | - |
| Ariz. | - | - | 4 | - | - | 1 | - | - | - | - | - | - |
| Utah | - | - | - | 24 | - | 2 | - | - | - | - | - | - |
| Nev. | - | 1 | - | 8 | - | 2 | U | - | U | - | - | - |
| PACIFIC | 1 | 10 | 27 | 153 | 4 | 16 | - | - | - | - | - | - |
| Wash. | - | - | - | - | - | - | - | - | - | - | - | - |
| Oreg. | - | 1 | 11 | 28 | 2 | 2 | - | - | - | - | - | - |
| Calif. | 1 | 9 | 16 | 125 | 2 | 14 | - | - | - | - | - | - |
| Alaska | - | - | - | - | - | - | - | - | - | - | - | - |
| Hawaii | - | - | - | - | - | - | - | - | - | - | - | - |
| Guam | - | - | - | 1 | - | - | U | - | U | - | - | - |
| P.R. | - | - | - | - | 1 | - | - | - | - | - | - | - |
| V.I. | - | - | - | - | - | - | U | - | U | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | U | - | U | - | - | - |
| C.N.M.I. | - | - | - | - | - | - | U | - | U | - | - | - |

N: Not notifiable U: Unavailable -: no reported cases

*No cases were reported in children <5 years.

†For imported measles, cases include only those resulting from importation from other countries.

## TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending January 4, 1997, and January 6, 1996 (1st Week)

| Reporting Area | Meningococcal Disease | | Mumps | | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 |
| UNITED STATES | 12 | 64 | 1 | 1 | 9 | 68 | 68 | 19 | - | - | - |
| NEW ENGLAND | - | 8 | - | - | - | 2 | 2 | - | - | - | - |
| Maine | - | 3 | U | - | - | U | - | - | U | - | - |
| N.H. | - | - | - | - | - | 2 | 2 | - | - | - | - |
| Vt. | - | 1 | U | - | - | U | - | - | U | - | - |
| Mass. | - | - | - | - | - | - | - | - | - | - | - |
| R.I. | - | - | - | - | - | - | - | - | - | - | - |
| Conn. | - | 4 | U | - | - | U | - | - | U | - | - |
| MID. ATLANTIC | - | 4 | - | - | 2 | - | - | 1 | - | - | - |
| Upstate N.Y. | - | - | - | - | - | - | - | - | - | - | - |
| N.Y. City | - | 2 | U | - | - | U | - | - | U | - | - |
| N.J. | - | 1 | U | - | 2 | U | - | 1 | U | - | - |
| Pa. | - | 1 | U | - | - | U | - | - | U | - | - |
| E.N. CENTRAL | 3 | 10 | 1 | 1 | 5 | - | - | 2 | - | - | - |
| Ohio | 3 | 2 | - | - | 4 | - | - | 1 | - | - | - |
| Ind. | - | 1 | - | - | - | - | - | - | - | - | - |
| Ill. | - | 5 | - | - | - | - | - | - | - | - | - |
| Mich. | - | 1 | 1 | 1 | 1 | - | - | - | - | - | - |
| Wis. | - | 1 | U | - | - | U | - | 1 | U | - | - |
| W.N. CENTRAL | 1 | 7 | - | - | - | - | - | 1 | - | - | - |
| Minn. | - | - | U | - | - | U | - | - | U | - | - |
| Iowa | 1 | 1 | - | - | - | - | - | - | - | - | - |
| Mo. | - | 5 | - | - | - | - | - | 1 | - | - | - |
| N. Dak. | - | - | - | - | - | - | - | - | - | - | - |
| S. Dak. | - | - | - | - | - | - | - | - | - | - | - |
| Nebr. | - | 1 | - | - | - | - | - | - | - | - | - |
| Kans. | - | - | - | - | - | - | - | - | - | - | - |
| S. ATLANTIC | 5 | 5 | - | - | 1 | - | - | - | - | - | - |
| Del. | - | - | - | - | - | - | - | - | - | - | - |
| Md. | - | 1 | U | - | - | U | - | - | U | - | - |
| D.C. | 1 | - | - | - | - | - | - | - | - | - | - |
| Va. | - | - | - | - | - | - | - | - | - | - | - |
| W. Va. | - | - | U | - | - | U | - | - | U | - | - |
| N.C. | - | - | - | - | - | - | - | - | - | - | - |
| S.C. | 4 | - | - | - | 1 | - | - | - | - | - | - |
| Ga. | - | 4 | - | - | - | - | - | - | - | - | - |
| Fla. | - | - | - | - | - | - | - | - | - | - | - |
| E.S. CENTRAL | - | 5 | - | - | - | - | - | 3 | - | - | - |
| Ky. | - | 2 | - | - | - | - | - | 3 | - | - | - |
| Tenn. | - | 2 | - | - | - | - | - | - | - | - | - |
| Ala. | - | 1 | - | - | - | - | - | - | - | - | - |
| Miss. | - | - | U | - | - | U | - | - | N | N | N |
| W.S. CENTRAL | - | 2 | - | - | - | - | - | - | - | - | - |
| Ark. | - | 2 | - | - | - | - | - | - | - | - | - |
| La. | - | - | - | - | - | - | - | - | - | - | - |
| Okla. | - | - | - | - | - | - | - | - | - | - | - |
| Tex. | - | - | - | - | - | - | - | - | - | - | - |
| MOUNTAIN | - | 4 | - | - | 1 | 65 | 65 | 7 | - | - | - |
| Mont. | - | - | - | - | - | - | - | - | - | - | - |
| Idaho | - | - | - | - | - | 62 | 62 | - | - | - | - |
| Wyo. | - | - | - | - | - | - | - | - | - | - | - |
| Colo. | - | 2 | - | - | - | - | - | - | - | - | - |
| N. Mex. | - | 2 | N | N | N | - | - | 1 | - | - | - |
| Ariz. | - | - | - | - | - | 3 | 3 | - | - | - | - |
| Utah | - | - | - | - | - | - | - | - | - | - | - |
| Nev. | - | - | U | - | 1 | U | - | 6 | U | - | - |
| PACIFIC | 3 | 19 | - | - | - | 1 | 1 | 5 | - | - | - |
| Wash. | - | - | - | - | - | - | - | - | - | - | - |
| Oreg. | 3 | 4 | - | - | - | 1 | 1 | 5 | - | - | - |
| Calif. | - | 15 | - | - | - | - | - | - | - | - | - |
| Alaska | - | - | - | - | - | - | - | - | - | - | - |
| Hawaii | - | - | - | - | - | - | - | - | - | - | - |
| Guam | - | 1 | U | - | 1 | U | - | - | U | - | - |
| P.R. | - | - | - | - | - | - | - | - | - | - | - |
| V.I. | - | - | U | - | - | U | - | - | U | - | - |
| Amer. Samoa | - | - | U | - | - | U | - | - | U | - | - |
| C.N.M.I. | - | - | U | - | - | U | - | - | U | - | - |

N: Not notifiable U: Unavailable -: no reported cases

## TABLE IV. Deaths in 122 U.S. cities,* week ending January 4, 1997 (1st Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | >65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 692 | 527 | 92 | 44 | 14 | 15 | 68 |
| Boston, Mass. | 134 | 86 | 23 | 14 | 5 | 6 | 3 |
| Bridgeport, Conn. | 46 | 37 | 5 | 2 | 1 | 1 | 6 |
| Cambridge, Mass. | 33 | 28 | 4 | 1 | - | - | 5 |
| Fall River, Mass. | 44 | 35 | 6 | 3 | - | - | 4 |
| Hartford, Conn. | 72 | 52 | 12 | 4 | 2 | 2 | 3 |
| Lowell, Mass. | 31 | 28 | 2 | 1 | - | - | 4 |
| Lynn, Mass. | 15 | 13 | 1 | - | 1 | - | 1 |
| New Bedford, Mass. | 31 | 29 | 2 | - | - | - | 2 |
| New Haven, Conn. | 56 | 39 | 9 | 4 | 2 | 2 | 9 |
| Providence, R.I. | 65 | 48 | 11 | 3 | 2 | 1 | 3 |
| Somerville, Mass. | 5 | 4 | - | 1 | - | - | - |
| Springfield, Mass. | 34 | 30 | 1 | - | 1 | 2 | 3 |
| Waterbury, Conn. | 48 | 40 | 5 | 3 | - | - | 6 |
| Worcester, Mass. | 78 | 58 | 11 | 8 | - | 1 | 19 |
| MID. ATLANTIC | 2,804 | 1,933 | 530 | 245 | 49 | 49 | 209 |
| Albany, N.Y. | 65 | 53 | 10 | 2 | - | - | 5 |
| Allentown, Pa. | 28 | 23 | 5 | - | - | - | 2 |
| Buffalo, N.Y. | 64 | 50 | 10 | 2 | 1 | 1 | 5 |
| Camden, N.J. | 46 | 29 | 12 | 1 | 3 | 1 | 1 |
| Elizabeth, N.J. | 10 | 8 | 1 | 1 | - | - | 2 |
| Erie, Pa.§ | 53 | 44 | 6 | 2 | - | 1 | 5 |
| Jersey City, N.J. | 73 | 47 | 17 | 7 | - | 2 | 1 |
| New York City, N.Y. | 1,324 | 896 | 261 | 127 | 23 | 17 | 85 |
| Newark, N.J. | 92 | 39 | 27 | 20 | 2 | 4 | 3 |
| Paterson, N.J. | 36 | 20 | 12 | 2 | - | 1 | 3 |
| Philadelphia, Pa. | 500 | 324 | 100 | 50 | 12 | 14 | 33 |
| Pittsburgh, Pa.§ | 83 | 66 | 10 | 6 | - | 1 | 9 |
| Reading, Pa. | 19 | 15 | 1 | 2 | 1 | - | 10 |
| Rochester, N.Y. | 178 | 137 | 23 | 11 | 6 | 1 | 20 |
| Schenectady, N.Y. | 22 | 17 | 2 | 3 | - | - | 3 |
| Scranton, Pa.§ | 34 | 30 | 3 | 1 | - | - | 2 |
| Syracuse, N.Y. | 102 | 84 | 12 | 3 | - | 3 | 15 |
| Trenton, N.J. | 53 | 34 | 13 | 2 | 1 | 3 | 4 |
| Utica, N.Y. | 23 | 17 | 5 | 1 | - | - | 1 |
| Yonkers, N.Y. | U | U | U | U | U | U | U |
| E.N. CENTRAL | 2,272 | 1,607 | 418 | 136 | 59 | 51 | 178 |
| Akron, Ohio | 66 | 53 | 8 | - | 2 | 3 | 2 |
| Canton, Ohio | 53 | 43 | 5 | 4 | - | 1 | 6 |
| Chicago, Ill. | 498 | 308 | 104 | 50 | 18 | 17 | 42 |
| Cincinnati, Ohio | 54 | 34 | 17 | 2 | - | 1 | 6 |
| Cleveland, Ohio | 135 | 88 | 29 | 11 | 4 | 3 | 3 |
| Columbus, Ohio | 205 | 146 | 37 | 11 | 5 | 6 | 20 |
| Dayton, Ohio | 139 | 110 | 19 | 4 | 6 | - | 13 |
| Detroit, Mich. | 231 | 147 | 52 | 18 | 8 | 6 | 5 |
| Evansville, Ind. | 40 | 32 | 6 | - | 2 | - | 1 |
| Fort Wayne, Ind. | 66 | 44 | 18 | 2 | 1 | 1 | 6 |
| Gary, Ind. | 24 | 12 | 5 | 1 | 6 | - | 1 |
| Grand Rapids, Mich. | 60 | 54 | 4 | - | 1 | 1 | 12 |
| Indianapolis, Ind. | 190 | 134 | 43 | 7 | - | 6 | 13 |
| Lansing, Mich. | 22 | 18 | 4 | - | - | - | 3 |
| Milwaukee, Wis. | 148 | 116 | 18 | 7 | 2 | 5 | 14 |
| Peoria, Ill. | 37 | 33 | 3 | 1 | - | - | 5 |
| Rockford, Ill. | 59 | 49 | 6 | 2 | 1 | 1 | 10 |
| South Bend, Ind. | 57 | 48 | 5 | 2 | 2 | - | 11 |
| Toledo, Ohio | 109 | 80 | 24 | 5 | - | - | 3 |
| Youngstown, Ohio | 79 | 58 | 11 | 9 | 1 | - | 2 |
| W.N. CENTRAL | 658 | 476 | 112 | 37 | 18 | 13 | 47 |
| Des Moines, Iowa | 47 | 35 | 8 | 2 | - | 2 | 1 |
| Duluth, Minn. | 31 | 21 | 10 | - | - | - | 1 |
| Kansas City, Kans. | 13 | 5 | 4 | 4 | - | - | 1 |
| Kansas City, Mo. | 71 | 48 | 7 | 6 | 3 | 3 | 3 |
| Lincoln, Nebr. | 58 | 50 | 7 | 1 | - | - | 8 |
| Minneapolis, Minn. | 161 | 124 | 30 | 5 | 1 | 1 | 23 |
| Omaha, Nebr. | 56 | 39 | 9 | 3 | 3 | 2 | 6 |
| St. Louis, Mo. | 142 | 102 | 23 | 9 | 6 | 2 | - |
| St. Paul, Minn. | 38 | 28 | 7 | 3 | - | - | 2 |
| Wichita, Kans. | 41 | 24 | 7 | 4 | 3 | 3 | 2 |
| S. ATLANTIC | 1,119 | 757 | 195 | 125 | 26 | 16 | 54 |
| Atlanta, Ga. | 141 | 87 | 31 | 18 | 5 | - | 5 |
| Baltimore, Md. | 274 | 181 | 50 | 32 | 8 | 3 | 23 |
| Charlotte, N.C. | U | U | U | U | U | U | U |
| Jacksonville, Fla. | 141 | 102 | 21 | 13 | 3 | 2 | 5 |
| Miami, Fla. | 105 | 67 | 21 | 15 | - | 2 | - |
| Norfolk, Va. | 63 | 47 | 5 | 7 | 1 | 2 | 7 |
| Richmond, Va. | U | U | U | U | U | U | U |
| Savannah, Ga. | 25 | 19 | 5 | - | 1 | - | - |
| St. Petersburg, Fla. | 53 | 46 | 4 | - | 1 | 2 | 1 |
| Tampa, Fla. | 171 | 128 | 23 | 12 | 3 | 5 | 10 |
| Washington, D.C. | 128 | 72 | 29 | 23 | 4 | - | 3 |
| Wilmington, Del. | 18 | 8 | 5 | 5 | - | - | - |
| E.S. CENTRAL | 522 | 354 | 112 | 33 | 12 | 10 | 57 |
| Birmingham, Ala. | 45 | 33 | 9 | 1 | - | 1 | 2 |
| Chattanooga, Tenn. | 58 | 45 | 9 | 4 | - | - | 5 |
| Knoxville, Tenn. | 59 | 46 | 10 | 1 | 2 | - | 11 |
| Lexington, Ky. | 52 | 35 | 13 | 2 | - | 2 | 6 |
| Memphis, Tenn. | 117 | 75 | 27 | 9 | 4 | 2 | 9 |
| Mobile, Ala. | 45 | 35 | 5 | 2 | 2 | 1 | 4 |
| Montgomery, Ala. | 22 | 16 | 3 | 3 | - | - | 6 |
| Nashville, Tenn. | 124 | 69 | 36 | 11 | 4 | 4 | 14 |
| W.S. CENTRAL | 1,178 | 756 | 260 | 108 | 41 | 13 | 64 |
| Austin, Tex. | 42 | 22 | 12 | 6 | 2 | - | 2 |
| Baton Rouge, La. | 7 | 3 | 3 | 1 | - | - | 1 |
| Corpus Christi, Tex. | 37 | 26 | 7 | 2 | 1 | 1 | 2 |
| Dallas, Tex. | 177 | 107 | 49 | 13 | 8 | - | 5 |
| El Paso, Tex. | 72 | 45 | 16 | 6 | 5 | - | 2 |
| Ft. Worth, Tex. | 58 | 34 | 13 | 7 | 4 | - | 2 |
| Houston, Tex. | 325 | 209 | 69 | 34 | 10 | 3 | 24 |
| Little Rock, Ark. | 65 | 47 | 13 | 2 | 2 | 1 | 7 |
| New Orleans, La. | 78 | 41 | 18 | 14 | 3 | 2 | - |
| San Antonio, Tex. | 175 | 114 | 35 | 14 | 6 | 6 | 5 |
| Shreveport, La. | 10 | 5 | 4 | 1 | - | - | 2 |
| Tulsa, Okla. | 132 | 103 | 21 | 8 | - | - | 12 |
| MOUNTAIN | 874 | 639 | 136 | 62 | 16 | 21 | 85 |
| Albuquerque, N.M. | 96 | 69 | 18 | 7 | 1 | 1 | 7 |
| Boise, Idaho | 54 | 46 | 2 | 5 | - | 1 | 5 |
| Colo. Springs, Colo. | 52 | 39 | 8 | 3 | 1 | 1 | 4 |
| Denver, Colo. | 78 | 55 | 11 | 8 | - | 4 | 10 |
| Las Vegas, Nev. | 109 | 82 | 21 | 4 | - | 2 | 9 |
| Ogden, Utah | 20 | 17 | 2 | - | - | 1 | 4 |
| Phoenix, Ariz. | 159 | 103 | 29 | 15 | 5 | 7 | 7 |
| Pueblo, Colo. | 38 | 29 | 6 | 3 | - | - | 4 |
| Salt Lake City, Utah | 122 | 95 | 12 | 8 | 5 | 2 | 15 |
| Tucson, Ariz. | 146 | 104 | 27 | 9 | 4 | 2 | 20 |
| PACIFIC | 1,256 | 961 | 177 | 82 | 21 | 15 | 165 |
| Berkeley, Calif. | 24 | 14 | 8 | 1 | - | 1 | 3 |
| Fresno, Calif. | 89 | 60 | 17 | 6 | 3 | 3 | 8 |
| Glendale, Calif. | U | U | U | U | U | U | U |
| Honolulu, Hawaii | 85 | 66 | 9 | 8 | 1 | 1 | 10 |
| Long Beach, Calif. | 79 | 56 | 17 | 3 | 2 | 1 | 15 |
| Los Angeles, Calif. | U | U | U | U | U | U | U |
| Pasadena, Calif. | 29 | 24 | 3 | 1 | - | 1 | 6 |
| Portland, Oreg. | 90 | 67 | 10 | 10 | 2 | 1 | 7 |
| Sacramento, Calif. | U | U | U | U | U | U | U |
| San Diego, Calif. | 135 | 98 | 23 | 11 | 3 | - | 16 |
| San Francisco, Calif. | 149 | 109 | 19 | 18 | 2 | 1 | 27 |
| San Jose, Calif. | 171 | 140 | 20 | 5 | 2 | 4 | 33 |
| Santa Cruz, Calif. | 54 | 45 | 4 | 4 | 1 | - | 7 |
| Seattle, Wash. | 163 | 127 | 24 | 9 | 2 | 1 | 6 |
| Spokane, Wash. | 78 | 64 | 9 | 2 | 3 | - | 12 |
| Tacoma, Wash. | 110 | 91 | 14 | 4 | - | 1 | 15 |
| TOTAL | 11,375¶ | 8,010 | 2,032 | 870 | 254 | 203 | 927 |

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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